The walls were much the thickest on the north side, nearly double those on the south, measuring $1\frac{1}{2}$ foot through.

It being in a locality where sand and gravel abounded, their materials were freely mixed with the clay.

The covered ways leading from the base to objects of plunder at a distance were in this case larger and more numerous than any I have seen before. The main one measured 12 inches in diameter, and gave off several branches which proceeded in various directions. These were traced to sticks, stumps and logs, which afforded them prey.

In this case the labourers in the hill were generally of the smaller class, while those in the covered ways and in the stumps were larger, having strong, stout jaws, well-adapted to the gnawing of wood. The "royal chamber" was found raised about $1\frac{1}{2}$ foot above the level of the ground.

Hill 3rd.—Circumference at base, 50 feet. Height, 14 feet.

The notes do not state whether this is the perpendicular height or not. Several fresh turrets were erected on the top, having a moist, deep red, granular appearance.

The structure called the "royal chamber" measured externally 10 inches in length, internally 8 inches. Its height from the level of the ground was 2 feet 8 inches. The length of the queen $4\frac{3}{4}$ inches.

Shrubs or small trees are frequently seen growing up through the hills. Such trees are never seen dead, consequently are not eaten by the insect.

XI.—*On a supposed new species of* Glyceria.

By Frederick Townsend, B.A.*

In 1846 I drew up a description of a supposed new species of *Glyceria*, which had probably been confounded with other described species, viz. *G. fluitans* and *G. plicata*; and a paper on the three plants was read before the Botanical Society of Edinburgh on November 9 in that year, but for the purpose of adding the results of further observations, it was not then published. Revised characters for, and some remarks upon, the three supposed species are now again submitted to the Society.

In my former paper I applied the name of *G. hybrida* to the new plant; but as the use of that word might lead to erroneous theoretical conclusions, I now substitute the name of *G. pedicellata*. The specific characters may stand as follows:—

1. *Glyceria fluitans* (R. Br.). Panicle simple, elongate, subsecund, spreading whilst in flower, otherwise close; branches

* Read before the Botanical Society of Edinburgh Dec. 13, 1849.

simple, lowermost mostly in pairs; rachis smooth; spikelets linear, of 7–12 acute florets; *outer pale oblong-lanceolate, length exceeding twice its breadth*: apex acute, somewhat apiculate; *anthers five times as long as broad*; *sheaths even*; carcopsis linear-elliptical.

Var. β. Inflorescence spiked.

Rachis perfectly smooth, never swollen as in *G. plicata*. Leaves pungent; sheaths roughish; ligule obtuse, frequently obscurely three-toothed. Panicle subsecund, elongate; branches not bearing more than five spikelets, one branch only of each of the lowermost clusters bearing several spikelets; uppermost spikelets of the branches and rachis mostly sessile or upon short rigid pedicels; pedicels more or less scabrous. Inner pale equaling the outer in length or surpassing it. Anthers purple, sometimes yellow. Careopsis linear-elliptical.

It flowers from June to September, sometimes bearing a second crop late in the year, and is universally distributed. It grows in stagnant and running water.

2. *G. pedicellata*. Panicle simple, elongate, subsecund; branches simple, always spreading, lowermost mostly in threes; rachis smooth; spikelets linear, of 7–16 obtuse florets; *outer pale oblong, twice as long as broad*: apex entire or slightly and irregularly denticulate-crenate; *anthers three times as long as broad*; *sheaths sulcate*.

Rachis perfectly smooth, never swollen as in *G. plicata*. Leaves plicate, acute; sheaths roughish; ligule obtuse, somewhat apiculate. Panicle subsecund, elongate; branches not bearing more than six spikelets, one branch only of each of the lowermost clusters bearing several spikelets; spikelets more or less stalked; pedicels slender, flexible. Outer pale strongly ribbed when dry, more membranous than in the other two species; inner pale rather shorter than the outer. Squamulæ with an inflated appearance. Anthers always yellow; lips incurved after bursting. The careopsis has not been observed.

It flowers from June to September, and has been noticed in several places in Cambridgeshire, and at Dovedale near Blockley, Worcestershire. It is found in stagnant and running water.

3. *G. plicata* (Fries!). Panicle compound; branches compound, always spreading, lowermost mostly in fives, uppermost crowded; rachis scabrous above; spikelets linear, of 7–12 rather obtuse florets; *outer pale oval, not twice as long as broad*: apex obtuse-angled, obscurely three-toothed; *anthers twice as long as broad*; *sheaths sulcate*; carcopsis roundish-elliptical.

Var. β. Panicle simple.

Rachis more or less rough from just below the panicle and

upwards, wavy and twisted above, and frequently with a swollen appearance. Leaves plicate, rather obtuse, more flaccid and of a darker green than in the other two species; sheaths sulcate, rough; ligule obtuse, apiculate, obscurely three-toothed or entire. Panicle often drooping, not so elongate as in either of the above; clusters arranged at shorter distances; branches often spreading in all directions from the twisting of the rachis, uppermost crowded, a single branch often bearing sixteen or more spikelets, two branches of each of the lowermost clusters bearing several spikelets; spikelets shorter than in either of the above, uppermost spikelets of the branches and rachis sessile or upon short rigid pedicels; pedicels always scabrous. Florets smaller than in either of the above. Inner pale rather shorter than the outer. Anthers purple, sometimes yellow. Careopsis roundish-elliptical, and at once distinguishable from that of *G. fluitans*, which is linear-elliptical.

It flowers from June to September, sometimes bearing a second crop late in the year, and is of frequent occurrence. It grows in stagnant and running water. This is the *G. plicata* (Fries), 'Herb. Normale Suec.' fasc. 5. No. 91, and is thus proved to be the plant described under that name by him.

Glyceria fluitans may at once be distinguished by its *even* sheaths, those of the other species under consideration being sulcate. *G. pedicellata* may be known from *G. plicata* by its spikelets being much longer and florets larger, its panicle simple and elongate, one branch only of each cluster bearing more than one spikelet, and the whole plant of a lighter green and more wire-like. A common observer might at a glance distinguish the plants by these characters.

The character of the inflorescence in *G. pedicellata* appears constant, whilst in the other plants it is variable, and for this reason I have noticed varieties derived from the form of inflorescence. By a compound panicle I understand that the main branches develope other branches upon which the *spikelets* are arranged, and the panicle is thus twice compound; in the simple panicle the pedicels of the spikelets spring directly from the main branches.

The name *pedicellata* has been chosen in consideration of the pedicels of the spikelets being longer and more decided in that plant than in the others, which have frequently quite sessile spikelets.

I have met with no description of *G. pedicellata*. From its having somewhat intermediate characters, it has probably been confounded both with *G. fluitans* and *G. plicata*. With regard to published figures, of which there are many, I will venture a few remarks. The figure given by Reichenbach (Icon. Fl. Germ.

vii. t. 79) is an excellent one of *G. plicata*; except the fruit, which is a tolerable representation of that of *G. fluitans*, as will be seen by reference to Nees von Esenbeck (Gen. Pl. Fl. Germ. Monocot. i. 57), whose figure of the fruit is exactly that of *G. plicata*; the rest of the plate by the latter author is not sufficiently accurate. By Parnell (Brit. Grasses, t. 45), as far as I can judge, a fair figure is given of *G. pedicellata*; and in Curtis (Fl. Lond. i. t. 18) also is to be found a good plate of the same plant: the form of the panicle is good; but the outer pale is too long, and the magnified representation still less accurate; the anthers and leaves are accordant. There only remains one other figure to be noticed, viz. that given in 'English Botany' (t. 1520); it is however so faulty that I can determine nothing with sufficient accuracy.

Since the above was forwarded to the Botanical Society at Edinburgh on Nov. 29th, 1849, some "Remarks on *G. fluitans* and *G. plicata*" have appeared in the 'Phytologist' (iii. 734) from the pen of Mr. W. H. Purchas, on whose paper I should wish to say a few words. In *G. fluitans* I have not myself observed any characters by which specimens with appressed branches may be distinguished from those with the branches divaricate; colour is the only distinction which Mr. Purchas has remarked, and of this he appears to speak only from recollection and to consider almost valueless.

G. plicata α. of the same paper is certainly my *G. pedicellata*; but these plants do not agree in the proportion of the outer pale; in the latter the outer pale is twice as long as broad, in the former it is less than twice as long as broad. The character taken from the position of the apex of the outer pale with respect to the floret next above (when first attempting to distinguish the plants) I thought might be of value, but afterwards determined it to be worthless. The plicature of the leaves may be found in all these plants, but not generally in *G. fluitans*, whilst in *G. pedicellata* and *G. plicata* I have found the plicature pretty constant. That a specimen from Mr. Moore agrees with this plant is possible, as the two latter plants possess some characters in common and were not then distinguished; but an original specimen from that botanist preserved in Mr. Babington's herbarium is the *G. plicata* of this paper.

The description of *G. plicata* β, which Mr. Purchas thought to be my plant, is that of *G. plicata* (Fries), with the exception of the proportion of the outer pale and the character given of the leaves. It is curious that Mr. Purchas should never have observed the leaves to be folded, as I have found them very constantly so, having examined plants from numerous localities in several countries. The panicle has truly a "fuller look," "from the greater number of compound branches," as well as from

their being arranged at shorter distances. The same botanist also observes, that "two branches of each whorl are almost constantly compound," and this character I have taken the liberty of inserting in other words in my observations on this plant. The remainder of his paper accords with my own observations, with exceptions which have been already noticed. I have however frequently found this plant in stagnant pools, and cannot as yet discover that either of the three affects peculiar situations.

There is only one more remark to be made, and this respecting the suspected hybrid origin of the plant; Mr. Purchas seems to imply that I held that opinion, but in my original but unpublished paper it was expressly stated that my convictions were that it could not be a hybrid, and the plant was therefore considered by me as a species; the unfortunate choice of a name has not unnaturally conveyed a wrong impression of my views.

XII.—*Supplementary Notes on British* Odostomiæ.

By J. G. Jeffreys, F.R. & L.S.

Since the publication of my paper on this subject in the 'Annals of Natural History' for November 1848, the discoveries of that indefatigable conchologist Mr. Barlee, and the communications of other scientific friends, have induced me to notice the following additions of species and localities:—

Odostomia pallida var. *a*. Guernsey, Mr. Barlee.
Var. *b*. Loch Fyne, A. MacNab.

O. Rissoides var. *b*. Lerwick, Mr. Barlee.

O. alba var. *a*. This has been lately found by Mr. Alder on the coasts of Northumberland and the Isle of Man, and described by him in the Transactions of the Newcastle Naturalists' Club, under the name of *O. fulva*. It appears to attain a greater size than any other of the true *Odostomiæ*.

O. nitida monstr. Lerwick, Mr. Barlee.

O. albella var. *a*, minor, sutura profundiore. Lerwick, Mr. Barlee.

O. acuta. In this species, as well as *plicata* and *unidentata*, may be detected, by the aid of a good magnifying glass, faint but regular spiral striæ.

O. turrita. Birtabuy Bay, co. Galway, Mr. Barlee.

O. cylindrica. Lerwick, Mr. Barlee.

O. plicata var. *a*. Northumberland coast, Professor King. Guernsey; Burrow Island; Mr. Barlee.

O. unidentata. Arran Island and Birtabuy Bay, co. Galway; Burrow Island; Mr. Barlee.